Curriculum Vitae

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Contact Information

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Education

1973	B.S. Chemistry, Kansas State University (Magna Cum Laude)
1976	M.S. Chemistry, University of Illinois, Urbana-Champaign
1977	Ph.D. Analytical Chemistry, University of Illinois, Urbana-Champaign
2016	M.S. Bioinformatics, Johns Hopkins University, Baltimore

Post Graduate Education and Training

Training while employed by the DuPont Company, Wilmington, Delware

1978	Computer Languages: Fortran, Basic, PL/M, APL, SAIL
1980	Supervisory Training & Supervisory Management Workshops
1981	Database Management: MySQL, VAX/VMS DBMS
1983	Artificial Intelligence & Expert Systems Workshop
1984	Consultative Workshop
1987	Exceptional Management Practices
2011	Cultural Diversity Workshop, Respect: The Source of our Strength

Training while managing a private website development business

2001	Web Graphics and Site Design (HTML, CSS, JavaScript)
2001	Strategic Marketing Planning

Training while postdoctoral fellow at University of Maryland, School of Medicine

2013	Biochemistry via the Open Learning Initiative, Carnegie Mellon University
2014	USCS Genome Browser, USCS Workshop
2015	Integrative Genomics Viewer, Broad Institute Workshop
2015	Genetic Epidemiology, University of Maryland
2015	Computer Languages: R, Python, SAS, Awk

Certifications

1980	Good Laboratory Practices & Validation of Computer Systems
1994	IBM Process Analysis Techniques
2005	Six Sigma Training & Certification
2011	Lean Manufacturing Supply Management

Employment History

Academic Appointments

2014-2016 ***Postdoctoral Fellow, Department of Medicine, Division of Endocrinology, Diabetes & Nutrition, University of Maryland School of Medicine***

Developed web-based systems for annotation of genomic variants and for storing/searching association results for Amish phenotypes.

Developed methods for combining Exome Chip genotyping from multiple sources and collaborated with Wellcome-Trust-Sanger to resolve issues.

Developed automated pipelines for running association analyses, generating Manhattan & QQ plots and loading results into the Amish results database.

2016-present ***Assistant Professor, Department of Medicine, University of Maryland School of Medicine***

Enabling the process of gene discovery by developing high-speed, automated approaches for analyzing genotype and phenotype associations combined with tools for searching, visualizing and understanding association results.

Other Employment

Industry Appointments

1977-1999 E. I. DuPont de Nemours & Company, Inc., CR&D and Agricultural Products

1977-1981 ***Scientific Computer Applications Specialist & Supervisor***

1981-1983 ***Supervisor, Computer Applications, DuPont Toxicology Laboratory***

Provided “first-time” automation/computerization for DuPont Haskell Laboratory’s toxicology and pathology research, reducing EPA report generation time by 9 months.

Trained and coached a diverse set of scientific professionals from many nationalities through their first experiences with computers.

1983-1985 ***Consulting Services for Scientific Computing – DuPont Research***

Recruited scientists and engineers for a new Consulting Services organization and managed the organization’s startup.

Supervised and mentored this group as they provided scientific computing to a diverse group of 5,000 scientists, engineers and technicians at a large corporate research facility.

Mentored professionals in the division’s Training organization as they developed and delivered computer training for the scientific community.

1985-1988 ***Research Supervisor, Chemical & Biological R&D Computer Services***

Managed group of twelve software engineers addressing the urgent needs of a dual-site R&D organization of 600 people who were, at the time, using a multitude of unconnected systems.

Based on solicited input from researchers and supervisors, developed an integrated approach for using data base management to store/query chemical and biological data with graphical display of chemical structures.

Supervised the successful merger of data, systems and computer support staff when the business acquired another company.

1988-1991 ***Manager, Manufacturing Information Systems, Ag Products***

1991-1993 ***Supply Chain Consultant, Supply Chain Optimization, Ag Products***

1994-1999 ***Operations Manager, Global Master Production Scheduling, Ag Products***

2005-2013 **Business Process Owner - Supply Planning - DuPont Crop Protection**

As Global Process Leader, worked with regional leaders and global supply planners to develop a globally-integrated, step-by-step process for planning DuPont Crop Protection's global supply chains using the SAP/APO software. The global core team included Accenture consultants from the US, Spain and India as well as regional process leaders in Europe, Asia-Pacific, Latin America and North America. The team represented 40 master schedulers located throughout the globe. Implementation included training development & delivery to global and regional planners.

Directed the work of Accenture consultants to enhance the functionality and reliability of the Supply Planning automation software (SAP/APO) and production system.

Built a Confluence website to maintain documentation on business processes and training related to Supply Planning and the use of SAP/APO.

Small Business Development - Sole Proprietorship

2000-2005 **Owner/Manager of a Business for Web Site Development**

Established a web site company, WhisperWorks, LLC, for developing and hosting web sites for small businesses located across the US.

Designed and maintained web sites for 34 businesses in 18 states.

Managed all aspects of the business from "marketing" to "production" to "accounting and tax".

Professional Society Membership

2013-present The American Society of Human Genetics

Public Service

1994-1999 Contact - Crisis/Suicide Telephone Helpline - United Way Agency

Publications

Peer-reviewed journal articles

1. **Perry JA**., Bryant MF., Malmstadt HV. Microprocessor-Controlled, Scanning Dye Laser for Spectrometric Analytical Systems, Anal. Chem. 1977, 49(12) 1702-1710
2. O'Hare EA, Yerges-Armstrong LM, **Perry JA**, Shuldiner AR, Zaghloul NA. Assignment of Functional Relevance to Genes at Type 2 Diabetes-Associated Loci Through Investigation of β-Cell Mass Deficits, Mol. Endocrinol. 2016 Apr;30(4):429-45. Epub 2016 Mar 10. PMID:26963759
3. Tise CG, **Perry JA**, Anforth LE, Pavlovich MA, Backman JD, Ryan KA, Lewis JP, O'Connell JR, Yerges-Armstrong LM, Shuldiner AR. From Genotype to Phenotype: Nonsense Variants in SLC13A1 Are Associated with Decreased Serum Sulfate and Increased Serum Aminotransferases. G3 (Bethesda). 2016 Sep 8;6(9):2909-18. doi: 10.1534/g3.116.032979. PubMed PMID: 27412988
4. Salimi S, Lewis JP, Yerges-Armstrong LM, Mitchell BD, Saeed F, O'Connell JR, **Perry JA**, Ryan KA, Shuldiner AR, Parsa A. Clopidogrel Improves Skin Microcirculatory Endothelial Function in Persons With Heightened Platelet Aggregation. J Am Heart Assoc. 2016 Oct 31;5(11). pii: e003751. PubMed PMID:27799230
5. Tise CG, Anforth LE, Zhou AE, **Perry JA**, McArdle PF, Streeten EA, Shuldiner AR, Yerges-Armstrong LM. Sex-specific effects of serum sulfate level and SLC13A1 nonsense variants on DHEA homeostasis. Mol Genet Metab Rep. 2017 Jan 27;10:84-91. doi: 10.1016/j.ymgmr.2017.01.005. PubMed PMID: 28154797.

6. Wang X, Salimi S, Deng Z, **Perry J**, Ryan KA, Li Z, Liu D, Streeten E, Shuldiner AR, Fu M. Evaluation of WISP1 as a candidate gene for bone mineral density in the Old Order Amish. Sci Rep. 2018 May 8;8(1):7141. doi: 10.1038/s41598-018-25272-4. PubMed PMID: 29739999; PubMed Central PMCID: PMC5940677.

7. Natarajan P, Peloso GM, Zekavat SM, Montasser M, Ganna A, Chaffin M, Khera AV, Zhou W, Bloom JM, Engreitz JM, Ernst J, O'Connell JR, Ruotsalainen SE, Alver M, Manichaikul A, Johnson WC, **Perry JA**, Poterba T, Seed C, Surakka IL, Esko T, Ripatti S, Salomaa V, Correa A, Vasan RS, Kellis M, Neale BM, Lander ES, Abecasis G, Mitchell B, Rich SS, Wilson JG, Cupples LA, Rotter JI, Willer CJ, Kathiresan S; NHLBI TOPMed Lipids Working Group. Deep-coverage whole genome sequences and blood lipids among 16,324 individuals. Nat Commun. 2018 Aug 23;9(1):3391. doi: 10.1038/s41467-018-05747-8. PubMed PMID: 30140000; PubMed Central PMCID: PMC6107638.

8. Montasser ME, O'Hare EA, Wang X, Howard AD, McFarland R, **Perry JA**, Ryan KA, Rice K, Jaquish CE, Shuldiner AR, Miller M, Mitchell BD, Zaghloul NA, Chang YC. An APOO Pseudogene on Chromosome 5q Is Associated With Low-Density Lipoprotein Cholesterol Levels. Circulation. 2018 Sep 25;138(13):1343-1355. doi: 10.1161/CIRCULATIONAHA.118.034016. PubMed PMID: 29593015; PubMed Central PMCID: PMC6162188.

9. Kraja AT, Liu C, Fetterman JL, Graff M, Have CT, Gu C, Yanek LR, Feitosa MF, Arking DE, Chasman DI, Young K, Ligthart S, Hill WD, Weiss S, Luan J, Giulianini F, Li-Gao R, Hartwig FP, Lin SJ, Wang L, Richardson TG, Yao J, Fernandez EP, Ghanbari M, Wojczynski MK, Lee WJ, Argos M, Armasu SM, Barve RA, Ryan KA, An P, Baranski TJ, Bielinski SJ, Bowden DW, Broeckel U, Christensen K, Chu AY, Corley J, Cox SR, Uitterlinden AG, Rivadeneira F, Cropp CD, Daw EW, van Heemst D, de Las Fuentes L, Gao H, Tzoulaki I, Ahluwalia TS, de Mutsert R, Emery LS, Erzurumluoglu AM, **Perry JA**, Fu M, Forouhi NG, Gu Z, Hai Y, Harris SE, Hemani G, Hunt SC, Irvin MR, Jonsson AE, Justice AE, Kerrison ND, Larson NB, Lin KH, Love-Gregory LD, Mathias RA, Lee JH, Nauck M, Noordam R, Ong KK, Pankow J, Patki A, Pattie A, Petersmann A, Qi Q, Ribel-Madsen R, Rohde R, Sandow K, Schnurr TM, Sofer T, Starr JM, Taylor AM, Teumer A, Timpson NJ, de Haan HG, Wang Y, Weeke PE, Williams C, Wu H, Yang W, Zeng D, Witte DR, Weir BS, Wareham NJ, Vestergaard H, Turner ST, Torp-Pedersen C, Stergiakouli E, Sheu WH, Rosendaal FR, Ikram MA, Franco OH, Ridker PM, Perls TT, Pedersen O, Nohr EA, Newman AB, Linneberg A, Langenberg C, Kilpeläinen TO, Kardia SLR, Jørgensen ME, Jørgensen T, Sørensen TIA, Homuth G, Hansen T, Goodarzi MO, Deary IJ, Christensen C, Chen YI, Chakravarti A, Brandslund I, Bonnelykke K, Taylor KD, Wilson JG, Rodriguez S, Davies G, Horta BL, Thyagarajan B, Rao DC, Grarup N, Davila-Roman VG, Hudson G, Guo X, Arnett DK, Hayward C, Vaidya D, Mook-Kanamori DO, Tiwari HK, Levy D, Loos RJF, Dehghan A, Elliott P, Malik AN, Scott RA, Becker DM, de Andrade M, Province MA, Meigs JB, Rotter JI, North KE. Associations of Mitochondrial and Nuclear Mitochondrial Variants and Genes with Seven Metabolic Traits. Am J Hum Genet. 2019 Jan 3;104(1):112-138. doi: 10.1016/j.ajhg.2018.12.001. Epub 2018 Dec 27. PubMed PMID: 30595373; PubMed Central PMCID: PMC6323610.

10. Sarnowski C, Leong A, Raffield LM, Wu P, de Vries PS, DiCorpo D, Guo X, Xu H, Liu Y, Zheng X, Hu Y, Brody JA, Goodarzi MO, Hidalgo BA, Highland HM, Jain D, Liu CT, Naik RP, O'Connell JR, **Perry JA**, Porneala BC, Selvin E, Wessel J, Psaty BM, Curran JE, Peralta JM, Blangero J, Kooperberg C, Mathias R, Johnson AD, Reiner AP, Mitchell BD, Cupples LA, Vasan RS, Correa A, Morrison AC, Boerwinkle E, Rotter JI, Rich SS, Manning AK, Dupuis J, Meigs JB. Impact of Rare and Common Genetic Variants on Diabetes Diagnosis by Hemoglobin A1c in Multi-Ancestry Cohorts: The Trans-Omics for Precision Medicine Program. Am J Hum Genet. 2019 Oct 3;105(4):706-718. doi: 10.1016/j.ajhg.2019.08.010. Epub 2019 Sep 26. PubMed PMID: 31564435.

11. Michael D. Kessler, Douglas P. Loesch, **James A. Perry**, Nancy L. Heard-Costa, Brian E. Cade, Heming Wang, Michelle Daya, John Ziniti, Soma Datta, Juan C. Celedon, Manuel E. Soto-Quiros, Lydiana Avila, Scott T. Weiss, Kathleen Barnes, Susan S. Redline, Ramachandran Vasan, Andrew D. Johnson, Rasika A. Mathias, Ryan Hernandez, James G. Wilson, Deborah A. Nickerson, Goncalo Abecasis, Sharon R. Browning, Sebastian Sebastian Zoellner, Jeffrey R. O'Connell, Braxton D. Mitchell, Timothy D. O'Connor De novo mutations across 1,465 diverse genomes reveal novel mutational insights and reductions in the Amish founder population. Proc Natl Acad Sci U S A. 2020

Feb 4;117(5):2560-2569. doi: 10.1073/pnas.1902766117. Epub 2020 Jan 21. PMID: 31964835; PMCID: PMC7007577.

12. Bridget Lin, Kelsey E Grinde, Jennifer Brody, Charles E Breeze, Laura M Raffield, Tim Thornton, Joe Mychaleckyj, **James A Perry**, [co-authors], Stephen S Rich, Dan-Yu Lin, Sharon Browning, Nora Franceschini Whole genome sequence analyses of eGFR in 23,732 people representing multiple ancestries in the NHLBI trans-omics for precision medicine (TOPMed) consortium. EBioMedicine, Volume 63, 2021, 103157, ISSN 2352-3964, https://doi.org/10.1016/j.ebiom.2020.103157.
13. Streeten EA, See VY, Jeng LBJ, Maloney KA, Lynch M, Glazer AM, Yang T, Roden D, Pollin TI, Daue M, Ryan KA, Van Hout C, Gosalia N, Gonzaga-Jauregui C, Economides A, **Perry JA**, O'Connell J, Beitelshees A, Palmer K, Mitchell BD, Shuldiner AR; Regeneron Genetics Center*. *KCNQ1* and Long QT Syndrome in 1/45 Amish: The Road From Identification to Implementation of Culturally Appropriate Precision Medicine. Circ Genom Precis Med. 2020 Dec;13(6):e003133. doi: 10.1161/CIRCGEN.120.003133. Epub 2020 Nov 3. PMID: 33141630; PMCID: PMC7748050.
14. Natarajan, P., Pampana, A., Graham, S. E., Ruotsalainen, S. E., **Perry, J. A.,** de Vries, P. S., Broome, J. G., Pirruccello, J. P., Honigberg, M. C., Aragam, K., Wolford, B., Brody, J. A., Antonacci-Fulton, L., Arden, M., Aslibekyan, S., Assimes, T. L., Ballantyne, C. M., Bielak, L. F., Bis, J. C., Cade, B. E., … Peloso, G. M. (2021). Chromosome Xq23 is associated with lower atherogenic lipid concentrations and favorable cardiometabolic indices. *Nature communications*, *12*(1), 2182. https://doi.org/10.1038/s41467-021-22339-1
15. Scalsky RJ, Chen YJ, Desai K, O'Connell JR, **Perry JA***, Hong CC*. Baseline cardiometabolic profiles and SARS-CoV-2 infection in the UK Biobank. PLoS ONE 2021; 16: 30248602. *Co-Senior Author. ***Subject of coverage by numerous media outlets, including Fox News, Times of India, The Tribune India, Hindustan Times, and Verywell Health, among others**.
16. Margaret A Taub, …, **James A Perry**, Nathan Pankratz, Alexander P Reiner, Rasika A Mathias. Novel genetic determinants of telomere length from a trans-ethnic analysis of 109,122 whole genome sequences in TOPMed. Submitted to PNAS, bioRxiv 749010; doi: https://doi.org/10.1101/749010
17. Tamara Ashvetiya, Sherry X Fan, Yi-Ju Chen, Charles H Williams, Jeffery R. O'Connell, **James A Perry**, Charles C Hong. Analysis of UK Biobank Cohort Reveals Novel Insights for Thoracic and Abdominal Aortic Aneurysms. Submitted to Plos One. bioRxiv 2021.02.05.429911; doi: https://doi.org/10.1101/2021.02.05.429911
18. Daniel DiCorpo, Sheila Gaynor, … **James A Perry**, Jeffrey R O'Connell…. Alisa Manning… Whole genome sequence association analysis of fasting glucose and fasting insulin levels in diverse cohorts from the NHLBI TOPMed Program. (submitted March 2021 to PLOS Genetics) medRxiv 2020.12.31.20234310; doi: https://doi.org/10.1101/2020.12.31.20234310
19. Jennifer Wessel, …**James Perry**, Jeffrey R O'Connell, … Alisa Manning. Rare Non-coding Variation Identified by Large Scale Whole Genome Sequencing Reveals Unexplained Heritability of Type 2 Diabetes: Trans-Omics for Precision Medicine (TOPMed) Program. medRxiv 2020.11.13.20221812; doi: https://doi.org/10.1101/2020.11.13.20221812
20. **James A Perry**, Brady J Gaynor, Braxton D Mitchell, Jeffrey R O'Connell, An Omics Analysis, Search and Information System (OASIS) for Enabling Biological Discovery in the Old Order Amish. bioRxiv 2021.05.02.442370; doi: https://doi.org/10.1101/2021.05.02.442370

Abstracts and Presentations

1. Perry CG, **Perry JA**, O'Connell JR, Yerges-Armstrong LM, Shuldiner AR. Filtering for Genomic Nonsense to Find Biological Significance: SLC13A1 Nonsense Variants Enriched in Founder Population are Associated with Reduced Serum Sulfate and Increased Aspartate Aminotransferase Levels. Oral Presentation, Annual Meeting of The American Society of Human Genetics, October 2014, San Diego, CA.

2. Taylor SI, **Perry JA**, Ryan K, Perry CG, Damcott CM, Horenstein RB, Mitchell B, O'Connell JR, O'Conner TD, Pollin TI, Silver KD, Yerges-Armstrong LM, Shuldiner AR. Genetic Variant (R27S) In Insulin-like Peptide 5 Is Associated With Increased Insulin Sensitivity. Poster presentation, American Diabetes Association Scientific Sessions, June 2015, Boston, MA.
3. O'Hare EA, Yerges-Armstrong LM, **Perry JA**, Shuldiner AR, Zaghloul NA. Functional analyses of type 2 diabetes-associated loci provides mechanistic insight into genetic susceptibility. Oral Presentation, Annual Meeting of The American Society of Human Genetics, October 2015, Baltimore, MD.
4. Wang X, Yerges-Armstrong LM, Deng ZL, **Perry JA**, Hong C, Parihar A, Wang H, Zhu YB, Hu ZY, Streeten EA, Shuldiner AR, Mitchell BD, Fu M. Identification of genetic variants in Wnt-1-induced secreted protein 1 gene associated with bone mineral density in Old Order Amish. Poster Presentation, Annual Meeting of The American Society of Human Genetics, October 2015, Baltimore, MD.
5. **Perry JA**, Ryan KA, Mitchell BD, O'Connell JR. OASIS: Omics Analysis, Search and Information System for Biological Discovery in Whole-Genome Sequence and Trans-Omics Datasets. Poster Presentation, Annual Meeting of The American Society of Human Genetics, October 2017, Orlando, FL.
6. **Perry JA**, OASIS: Omics Analysis, Search and Information System for Biological Discovery in TOPMed Whole-Genome Sequence and Trans-Omics Datasets. Oral Presentation, TOPMed Steering Committee and External Advisory Panel meeting, November 2017, Tysons, VA.
7. **Perry JA**, An Interactive Analysis Platform - OASIS: Omics Analysis, Search and Information System for Biological Discovery in TOPMed Whole-Genome Sequence and Trans-Omics Datasets. Oral Presentation, GSP-TOPMed Analysis Workshop, January 2018, Nashville, TN.
8. **Perry JA**, Manning AK, Majarian TD, Wessel J, Loesch DP, O'Connell JR. An Omics Analysis, Search and Information System (OASIS) for Enabling Discovery in the Trans-Omics for Precision Medicine (TOPMed) Diabetes Working Group. Poster Presentation, Cohorts for Heart & Aging Research in Genomic Epidemiology (CHARGE) Consortium Investigator Meeting, October 2018, Baltimore, MD.
9. **Perry JA**, Manning AK, Majarian TD, Wessel J, Loesch DP, O'Connell JR. An Omics Analysis, Search and Information System (OASIS) for Enabling Discovery in the Trans-Omics for Precision Medicine (TOPMed) Diabetes Working Group. Poster Presentation, Annual Meeting of The American Society of Human Genetics, October 2018, San Diego, CA.
10. **Perry JA**, Manning AK, Majarian TD, Wessel J, Loesch DP, O'Connell JR. An Omics Analysis, Search and Information System (OASIS) for Enabling Discovery in the Trans-Omics for Precision Medicine (TOPMed) Diabetes Working Group. Poster, Video & Podium Presentations, TOPMed Steering Committee and External Advisory Panel meeting, December 2018, Tysons, VA.
11. Tise CG, Kleinberger JW, Pavlovich MA, Daue ML, Loesch DP, Reid JG, Overton JD, O'Connell JR, **Perry JA**, Yerges-Armstrong LM, Shuldiner AR, Zaghloul NA. Autism in the Amish: Exome Sequencing Unveils Novel Coding Variant. Journal of Investigative Medicine, 2019 Vol. 67 (1), 238, abstract #405.
12. Pradeep Natarajan, **James Perry**, Akhil Pampana, Jai Broome, Jeff O'Connell, Fei Fei Wang, Alyna Khan, May Montasser, Lawrence Bielak, Daniel Weeks, Lisa Yanek, Juan Peralta, Stella Aslibekyan, Nicholette D. Allred, Brian E. Cade, Paul de Vries, Joshua Bis, Charles Kooperberg, James Wilson, Adolfo Correa, Debbie Nickerson, Gail Jarvik, L. Adrienne Cupples, Donna Arnett, Braxton Mitchell, Cathy Laurie, Stephen S. Rich, Jerome I. Rotter, Sekar Kathiresan, Cristen Willer, Gina M. Peloso; on behalf of the NHLBI TOPMed Lipids Working Group. Whole genome sequence association with plasma lipids in 42,658 individuals. AHA Poster Nov 2018
13. Natarajan P, Pampana A, Graham S, Klarin D, **Perry J**, Willer C, Peloso GM, on behalf of the TOPMed Lipids Working Group. An X Chromosome Genetic Association Analysis Identifies Variants in ChrXq23 with Lower Atherogenic Lipids and Lower Risk for Coronary Heart Disease. AHA Poster Nov 2019

14. Margaret Taub, Joshua Weinstock, Kruthika Iyer, Lisa R. Yanek, Matthew P. Conomos, Marios Arvanitis, Ali R. Keramati, John Lane, Tom Blackwell, Cecelia Laurie, Timothy Thornton, Alexis Battle, **James A. Perry**, Nathan Pankratz, Alexander Reiner, Rasika A. Mathias, on behalf of the NHLBI TOPMed Consortium. Thirteen novel genetic loci identified for telomere length leveraging 75K whole genome sequences in the Trans-Omics for Precision Medicine (TOPMed) Program. Podium Presentation, Annual Meeting of The American Society of Human Genetics, Oct 2019, Houston, TX.
15. **Perry JA**, Mitchell BD, O'Connell JR. An Omics Analysis, Search and Information System (OASIS) for Mining Association Summary Statistics from Biobanks and Knowledge Portals. Poster Presentation, Annual Meeting of The American Society of Human Genetics, Oct 2019, Houston, TX.
16. **Perry JA**, Mitchell BD, O'Connell JR. Mining Association Analysis Results from the UK Biobank Resource with an Omics Analysis, Search and Information System (OASIS). Poster and Virtual Presentations, Mid-Atlantic Nutrition and Obesity Research Center Annual Symposium, Nov 2020, Baltimore, MD.